

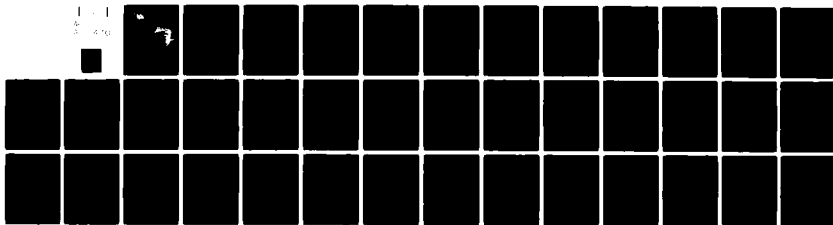
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DEFENSIVE AERIAL GUNNER CAREER LADDER AFS 111X0.(U)  
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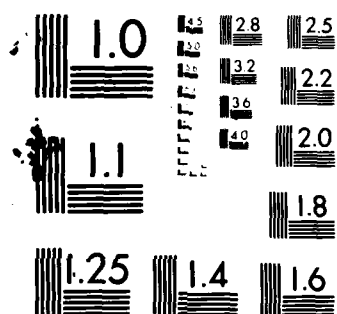
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# OCCUPATIONAL SURVEY REPORT

A stylized illustration of a globe with a grid pattern. A dark, cylindrical object, possibly a missile or aircraft component, is positioned diagonally across the globe, pointing towards the upper right.

DEFENSIVE AERIAL GUNNER CAREER LADDER

AFS 111X0

AFPT 90-111-432

FEBRUARY 1982

OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT CENTER  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78150

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# DISTRIBUTION FOR 111X0 OSRs AND TRAINING EXTRACTS

<u>ORGANIZATION</u>	<u>OSR</u>	<u>JOB INV</u>	<u>ANL EXT</u>	<u>TNG EXT</u>
AFMPC/MPCRPQ	2			
DEFENSE TECHNICAL INFORMATION CENTER	1	1		
AFHRL/MODS	2	6	1m	1m
AFMEA/MEMD	1	1	1h	1
HQ USAF/MPPT	1	1		1
AFHRL/LRT	1	1	1m	
ARMY OCCUPATIONAL SURVEY BRANCH	1	1		
CCAF/AYX	1	1		
3507/DPUI	1	1		
AFMPC/MPCHS	1	1		
HQ AFISC/DAP	1	1		
HQ ATC/TTQ	2	1		1
NODAC	1	1		
HQ USMC/OMU	1	1		
LMDC/AN	1			
HQ ATC/DPAE	3	3		3
HQ SAC/DPAT	3	3		3
HQ SAC/LGMQ (ATCLO)	1	1		1
HQ USAF/XOOTD (ATTN: CMSgt Lord)	1	1		1
HQ SAC/DOT (ATTN: CMSgt Dyka)				
HQ SAC/DOTPX	10	2	2	10
4018 CCTS/CCF, CARSWELL AFB (ATTN: CMSgt Judd)	1			1
4017 CCTS/CTOAG, CASTLE AFB 95342 (ATTN: CMSgt Lake)	1			1
AFMPC/MPCROR3 (ATTN: CMSgt Timlake)	2		1	2
8AF/DOTTP, BARKSDALE AFB 71110 (ATTN: CMSgt Purdy)	1			1
15AF/DOTTG, MARCH AFB 92518 (ATTN: CMSgt Drennen)	1			1
93 BOMB WING/DOTP, CASTLE AFB 95342 (ATTN: TSgt Leach)	1			1

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## PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Defensive Aerial Gunner career ladder (AFSC 111X0). The report was requested by HQ SAC/DOTPX. Authority for conducting occupational surveys is contained in AFR 35-2. Computer products from which this report was produced are available for use by operations and training officials.

The survey instrument used in this project was developed by Captain Clint Thatcher, Inventory Development Specialist. Major Ian Falle and Second Lieutenant Randall Agee analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are distributed to air staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

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## SUMMARY OF RESULTS

1. Survey Coverage. Inventory booklets were administered to Defensive Aerial Gunners (AFS 111X0) worldwide. Analysis results are based on the responses from 444 AFS 111X0 incumbents (72 percent of assigned). More than 99 percent of the incumbents were assigned to SAC.
2. Career Ladder Structure. Gunners, regardless of job or skill level, tended to perform a common set of operational tasks. As they progressed in skill level and TAFMS, more of their time tended to be spent performing training, supervisory, and management tasks, while less time was spent performing the operational tasks. Their jobs formed two distinguishable groups of operational gunners and staff managers. The operational gunners' jobs were further identifiable in groups according to aircraft model type (B-52D, G or H) and whether they were assigned as Combat Crew Training Squadron (CCTS) instructors.
3. Training Analysis. The AFS 111X0 Specialty Training Standard (STS) is currently being revised and has not been analyzed in this report. However, Task Difficulty and Training Emphasis data have been gathered and are displayed in the Analysis Extract published under separate cover.
4. Implications. This is a stable career ladder. All qualified career ladder personnel perform the spectrum of operational tasks. A new area of responsibility which involves the performance of Air Force Satellite Communications (AFSATCOM) System tasks has been added to duties of AFS 111X0 personnel. This responsibility should be considered for inclusion in the next scheduled review of the AFS 111X0 in AFR 39-1. Thirty percent or more of the AFS 111X0 personnel sampled performed all but four of the common aircrew tasks. The data will be included in a later analysis of all enlisted aircrew specialties which will highlight the common aircrew tasks.

**OCCUPATIONAL SURVEY REPORT  
DEFENSIVE AERIAL GUNNER CAREER LADDER  
(AFS 111X0)**

**INTRODUCTION**

This is a report of an occupational survey of the Defensive Aerial Gunner specialty (AFS 111X0) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center in December 1981. The 111X0 specialty was last surveyed in 1978.

**Objectives**

This project is part of a response to a request from HQ SAC/DOTPX for occupational survey information on five Air Force aircrew specialties to evaluate the feasibility of establishing a centralized undergraduate technical school for the enlisted aircrew specialties. Other projects will provide occupational survey information on AFSCs 112X0, 113X0, 114X0, and 115X0. Emphasis in each of these projects will be on providing current data on personnel utilization and job structure and their impact upon classification and training. Upon completion of all five Occupational Survey Reports, a summary report will be produced which examines the commonalities and differences identified among the five specialties, particularly in the performance of common aircrew duties.

**Background**

The history of the 111X0 career ladder dates back to the Turret System Gunners, AFS 323X1, of World War II vintage. In 1971, the Turret System Gunner career ladder changed from AFS 323X1 to AFS 327X0 and was retitled Defensive Fire Control System Operator. Then, under the enlisted aircrew reorganization in May of 1975, the career ladder received its present designation, 111X0, Defensive Aerial Gunner. A CEM Code designated 11100, Defensive Aerial Gunner Manager, was created 31 October 1978.

Personnel entering the Defensive Aerial Gunner career ladder are assigned to the Strategic Air Command (SAC) and are qualified as crew members on B-52 aircraft. Defensive aerial gunners spend a large amount of time in preflight, inflight, and postflight gunner activity since they are responsible for the defensive fire control systems aboard the B-52 aircraft. In addition, gunners pull alert duties and take on numerous squadron additional duties. Defensive aerial gunners receive initial training from Combat Crew Training Squadrons (CCTs) at Carswell AFB and at Castle AFB.

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## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-111-432. The 1977 job inventory for this AFSC was used as a basis for inventory development. After visits with personnel at Carswell AFB and Castle AFB, the previous inventory was updated and expanded to include common aircrew tasks, AFSATCOM tasks, and Sensitivity Time Control (STC) tasks. The resulting inventory contains 461 tasks that are grouped under 16 duty headings. The inventory also includes a background section that asks such information as job satisfaction, job title, job interest, and additional duties performed.

### Survey Administration

The job inventory was administered by Consolidated Base Personnel Offices (CBPOs) worldwide, to all incumbents holding a 111X0 DAFSC. These personnel were identified from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each member then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount of time spent) through five (about average time spent) to nine (very large amount of time spent).

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100. This procedure provides a basis for comparing tasks in terms of both percent members performing and relative average percent time spent.

### Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation of paygrade groups. Since more than 99 percent of Defensive Aerial Gunners are assigned to SAC, there is no issue of MAJCOM representativeness for this specialty. Table 1 lists the paygrade group distributions, and Table 2 lists the TAFMS distribution of the survey sample. As reflected in these tables, the survey sample provides a very good representation of the career ladder population.

TABLE 1  
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	17	10
E-4	18	19
E-5	34	36
E-6	16	18
E-7	8	10
E-8	4	3
E-9	<u>3</u>	<u>4</u>
	100	100

TOTAL 111X0 ASSIGNED - 613  
TOTAL 111X0 SAMPLED - 444  
PERCENT OF 111X0 IN SAMPLE - 72%

TABLE 2  
TAFMS DISTRIBUTION OF SURVEY SAMPLE

	<u>MONTHS TIME IN SERVICE</u>			
	<u>1-48</u>	<u>49-96</u>	<u>97+</u>	<u>TOTAL</u>
NUMBER IN AFS 111X0 SAMPLE	90	120	234	444
PERCENT IN AFS 111X0 SAMPLE	20%	27%	53%	100%

### Task Factor Administration

Selected DAFSC 11170 personnel were asked to complete a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories. The rating information is then used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each individual completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time required by the average member to learn to do the task. Task difficulty data were independently collected from 53 experienced DAFSC 11170 personnel. The interrater reliability (as assessed through components of variance of standard group means) for these raters was high at .96. The ratings were adjusted by the computer program, so that tasks of average difficulty have ratings of 5.00.

Job Difficulty Index (JDI). After computing a task difficulty index for each task item, it was then possible to compute a Job Difficulty Index (JDI) for the job groups identified in the survey analysis. This index provides a relative measure of which jobs, when compared to other jobs identified, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent (ADPUTS) as variables is the basis for the JDI. The index ranges from 1.0 for very easy jobs to 25.0 for very difficult jobs. The indices are adjusted so that the average JDI is 13.00. Thus, the more time a group spends on difficult tasks and the more tasks they perform, the higher the JDI.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate tasks on a ten-point scale from no training required to extremely heavy training required. Training emphasis is a rating of which tasks require structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently collected from 55 experienced DAFSC 11170 personnel. The interrater reliability (as assessed through the components of variance of standard group means) for these raters was .94, which indicated that there was a high degree of agreement among raters as to which tasks required some form of structured training and which did not. Tasks which were rated highest in training emphasis had ratings of 5.42 and above. The average training emphasis rating was 3.42.

When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can provide an insight into training requirements. This may help validate the lengthening or shortening of specific units of instruction in various training programs.

## CAREER LADDER STRUCTURE

The jobs performed within the Defensive Aerial Gunner career ladder were analyzed to determine the degree of similarity that exists among them.

Each incumbent in the sample is said to perform a set of tasks called a Job. A Job Type is comprised of a group of jobs whose incumbents perform many of the same tasks and spend similar amounts of time performing them. When a group of different job types have a substantial degree of similarity, they are labeled as a Cluster. In many career fields, there are specialized job types that are too dissimilar to be grouped into a cluster. These unique groups are labeled Independent Job Types.

This organization of similar jobs into Job Types and Clusters is made possible by a series of computer programs called the Comprehensive Occupational Data Analysis Programs (CODAP). A basic function of CODAP is to combine jobs into job types and clusters, based on the similarity of relative time spent performing sub-sets of tasks in the task inventory. Other functions of the CODAP system are used to display and further analyze the resulting job types and clusters. The analysis serves to identify: (1) the number and characteristics of different jobs within the career ladder; (2) the tasks which the incumbents in each job tend to perform in common; and (3) other distinguishing characteristics that are shared by the incumbents of each job.

Overall, the jobs within the Defensive Aerial Gunner career ladder are homogeneous. The jobs that were identified grouped into two main classifications: a cluster of operational Gunners and an Independent Job Type of staff managers. These jobs account for 93 percent of all 111X0 respondents. This structure is diagrammed in Figure 1, and is discussed in the following paragraphs:

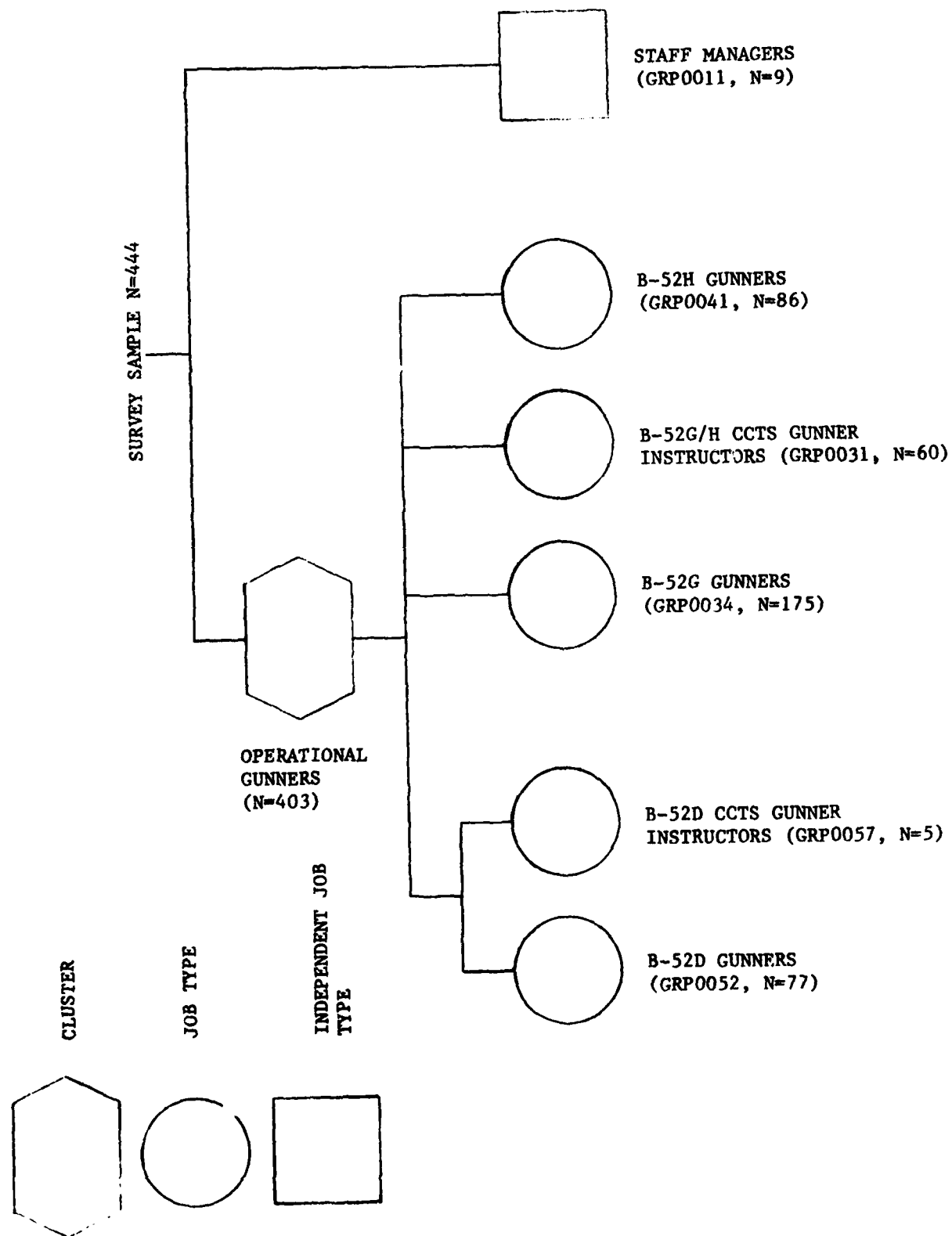
### I. OPERATIONAL GUNNERS (N=403)

- a. B-52D Gunners (N=77)
- b. B-52D CCTS Gunner Instructors (N=5)
- c. B-52G Gunners (N=175)
- d. B-52G/H CCTS Gunner Instructors (N=60)
- e. B-52H Gunners (N=86)

### II. STAFF MANAGERS (N=9)

I. OPERATIONAL GUNNERS. This cluster is composed of the operational gunners and instructors for the three B-52 models: B-52D, B-52G, and B-52H. As shown in Table 3, operational mission and flight related duties occupied the largest proportion of their time. Within this cluster of operational gunners, the tasks specific to the aircraft models tended to group the sample into model-specific communities. There was a further subset of instructional duties and tasks that identified the Combat Crew Training School (CCTS) instructors from the operational gunners. Overall, job satisfaction was high (see Table 4).

FIGURE 1



B-52D, B-52G, B-52H Gunners. Members of these three job types performed a common set of tasks. Supervisory tasks occupied a very small percentage of the total job time (approximately five percent), training tasks occupied roughly 10 percent of their time, and flight or mission related tasks accounted for approximately 80 percent of their time. Of the 48 common aircrew tasks included in the job inventory, all but four were performed by 30 percent or more of these incumbents. The four tasks that were not performed are:

- Inspect or prepare crew relief areas
- Operate emergency escape hatches
- Perform flight test for new equipment validation
- Perform wing walking

In addition, the B-52D Gunners were different from the G and H incumbents in that less than 30 percent of the B-52D respondents performed the two tasks that involved passengers:

- Demonstrate to passengers the proper use of life preservers, parachutes, or oxygen masks
- Instruct extra crew members or passengers on inflight or ground emergency procedures

The following list is a representative sample of those tasks performed by the gunners in these three job types:

- Conduct B-52 fire control systems (FCS) activity briefing
- Perform air refueling procedures
- Perform weapons preparation for release checklist
- Operate FCS
- Perform FCS malfunction analysis
- Adjust FCS components (e.g., receiver, scope)
- Perform disarming procedures
- Perform or practice emergency procedures (e.g., fire, bail out, ditching)

B-52D and B-52G/H CCTS Gunner Instructors. The incumbents in these two job types not only perform the same operational tasks as those performed by the non-CCTS gunners, but also were more involved in formal training related tasks. The B-52D CCTS instructors differed from the B-52G and B-52H CCTS instructors in the smaller relative time spent performing flight or mission related tasks, and the increased relative time spent performing supervisory and training tasks (see Table 3). Representative tasks which distinguish the CCTS instructors from the operational non-CCTS gunners include:

- Develop standardization, evaluation, or inspection procedures
- Counsel students
- Write correspondence
- Evaluate procedures
- Develop resident courses and materials
- Conduct training
- Administer tests
- Evaluate lesson plans, training devices, etc.
- Prepare course validation reports

II. STAFF MANAGERS. The staff manager jobs were distinguished by the high relative percent time spent performing tasks related to managerial responsibilities (70 percent), and the relatively small proportion of their time (seven percent) spent performing flight/mission related tasks (see Table 3). These staff managers were employed at MAJCOMs, Wings, or in Standardization/ Evaluation positions. Specific tasks that are representative for this group are:

- Plan layout of facilities
- Review unit emergency or disaster plans
- Prepare briefings
- Interpret policies, directives or procedures
- Evaluate suggestions
- Analyze mission requirements

TABLE 3

RELATIVE PERCENT TIME SPENT BY JOB TYPE AND INDEPENDENT JOB TYPE

	SUPERVISORY/MANAGEMENT (DUTIES A, B & C, P=20%)	MISSION/FLIGHT RELATED (DUTIES F, G, H, I, J, K, L, M, P=50%)	TRAINING (DUTIES D, O, P, P=20%)	ALERT (DUTY N, P=4%)	PAPERWORK (DUTY E, P=6%)
B-52D GUNNERS	4	76	12	6	2
B-52D GUNNER INSTRUCTORS	27	45	24	0	4
B-52G GUNNERS	4	79	9	8	2
B-52G/H GUNNER INSTRUCTORS	8	75	15	1	3
B-52H GUNNERS	4	79	9	8	2
GUNNER STAFF MANAGERS	70	12	13	0	5

NOTE. 1. P=PERCENT OF INVENTORY TASKS INCLUDED IN THIS DUTY GROUPING

2. MODEL SPECIFIC TASKS WERE COMBINED WHEN CALCULATING P. e.g.

PERFORM TAKEOFF PROCEDURES ON B52D

PERFORM TAKEOFF PROCEDURES ON B52G, AND

PERFORM TAKEOFF PROCEDURES ON B52H WERE COUNTED AS ONE TASK



TABLE 4

JOB SATISFACTION INFORMATION FOR 111X0 JOB GROUPS  
(PERCENT RESPONDING)

	B-52D GUNNERS (N=77)	B-52D CCTS GUNNER/ INSTRUCTORS (N=5)	B-52G GUNNERS (N=175)	B-52G/H CCTS GUNNER/ INSTRUCTORS (N=60)	B-52H GUNNERS (N=86)	STAFF MANAGERS (N=9)
<u>HOW DO YOU FIND YOUR JOB:</u>						
DULL	5	0	15	5	9	0
SO-SO	4	0	11	2	11	0
INTERESTING	91	80	73	93	79	89
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>						
VERY LITTLE OR NOT AT ALL	18	0	32	13	34	11
FAIRLY WELL TO PERFECTLY	81	80	68	87	66	89
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>						
VERY LITTLE OR NOT AT ALL	8	0	11	7	9	11
FAIRLY WELL TO PERFECTLY	91	100	87	93	91	89
<u>HOW SATISFIED ARE YOU WITH THE SENSE OF ACCOMPLISHMENT GAINED FROM YOUR JOB:</u>						
DISSATISFIED	14	0	30	8	23	0
AMBIVALENT	9	20	11	2	7	11
SATISFIED	74	80	57	88	70	89
<u>DO YOU PLAN TO REENLIST:</u>						
NO, I WILL RETIRE WITH 20 YEARS MILITARY SERVICE	12	20	10	12	5	33
NO OR PROBABLY NO	18	20	22	10	27	0
YES OR PROBABLY YES	69	80	67	75	69	67

## ANALYSIS OF 111X0 DAFSC GROUPS

An analysis of DAFSC groups is an important adjunct to career ladder structure analysis. The DAFSC analysis identifies differences in tasks performed at the various skill levels.

To aid in DAFSC group analysis, relative percent time figures have been summarized into groups of duties and presented in Table 5. Tables 6 to 9 are lists of representative tasks for the groups and allow a more detailed understanding of this career ladder. Table 10 is a listing of the relative percent time spent on each duty and can be used to gain an overall picture of the jobs performed by the skill level groups.

The 11130 and 11150 gunners spent the highest proportion of relative time performing the operational role. They had the lowest relative time spent (four percent) performing supervisory/management tasks, and the highest relative time spent (78 percent) performing mission/flight related tasks.

As the gunners progress through the skill levels, they tended to spend an increasingly larger relative amount of time performing supervisory/management tasks, and a subsequently smaller relative amount of time performing mission/flight related tasks. DAFSC 11130/11150 spent four percent, DAFSC 11170 spent nine percent and DAFSC 11190 and CEM Code 11100 spent 26 and 31 percent of relative time performing supervisory/management tasks. These numbers indicate that the first important change in supervisory/management functions occurs at the 9-skill level. As can be seen in Table 5, a similar picture is painted by the mission/flight related tasks. The 9-skill level personnel show the first notable decrease in relative time spent performing this group of tasks. It should be noted, however, that all skill levels from 11130 to 11100, performed the full spectrum of mission/flight related tasks.

In addition to these general trends, there was a notable increase in relative time spent training others (e.g., conducting mission qualification training, conducting initial qualification training) as the gunners move from DAFSC 11130/11150 to 11170 skill levels. This is exemplified by Table 11 which shows an increase in the number of 11170 personnel who were B-52 G/H CCTS Gunner Instructors.

In summary, this is an operationally oriented career ladder whose personnel tend to spend an increasing percentage of their time performing training, supervisory, and management functions as they progress through the skill levels.

TABLE 5

## RELATIVE PERCENT TIME SPENT PERFORMING DUTY GROUPS BY 111X0 DAFSC GROUPS

	DAFSC 11130/ 11150	DAFSC 11170	DAFSC 11190	DAFSC 11100
SUPERVISORY/MANAGEMENT (DUTIES A, B, C. P=20 PERCENT)	4	9	26	31
MISSION/FLIGHT RELATED (DUTIES F, G, H, I, J, K, L, M. P=50 PERCENT)	78	70	53	50
TRAINING (DUTIES D, O, P. P=20 PERCENT)	7	13	14	14
ALERT (DUTY N. P=4 PERCENT)	8	5	3	1
PAPERWORK (DUTY E. P=6 PERCENT)	2	3	3	4

NOTE: P = PERCENT OF TASK INVENTORY CONTAINED IN THIS GROUP OF DUTIES

TABLE 6

REPRESENTATIVE TASKS PERFORMED BY BOTH DAFSC 11130 AND 11150 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
F146 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	94
F165 REVIEW AFTO FORM 781 SERIES FOR AIRCRAFT DISCREPANCIES	94
H194 PERFORM PREFLIGHT WALKAROUND INSPECTIONS	92
F171 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	92
F148 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	91
F126 ANNOTATE AIRCRAFT WRITE-UPS ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT FORMS (AFTO FORM 781A)	90
F136 MONITOR RADIO COMMUNICATION TRANSMISSIONS	88
F152 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	87
F168 STUDY TECHNICAL ORDERS FOR ABNORMAL AND EMERGENCY INFLIGHT PROCEDURES	83
F125 ADVISE MAINTENANCE PERSONNEL IN IDENTIFYING AIRCRAFT SYSTEMS MALFUNCTIONS	82
M379 PERFORM RADAR MONITORING OF AIR TRAFFIC IN CONGESTED AREAS	80
G176 COORDINATE AIR FORCE SATELLITE COMMUNICATION (AFSATCOM) ACTIVITIES WITH CREW ON B-52G OR B-52H	74
J290 PERFORM 1BX AFSATCOM SYSTEM TERMINAL CHECKOUT PROCEDURES ON B-52G OR B-52H	72
I209 PERFORM BEFORE TAKEOFF PROCEDURES ON THE 1BX AFSATCOM SYSTEM ON B-52G OR B-52H	71
I224 TRANSMIT AFSATCOM LAUNCH MESSAGE FOR B-52G OR B-52H	71
K295 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 IMPROPER TURRET CONTROL IN TRACK MODES	68
K327 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE CONTINUOUSLY SWEEPS PAST THE TARGET (NO LOCK ON)	65
K299 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 C SCOPE VIDEO LOSS	64

TABLE 7

REPRESENTATIVE TASKS PERFORMED BY DAFSC 11170 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
F165 REVIEW AFTO FORM 781 SERIES FOR AIRCRAFT DISCREPANCIES	97
F126 ANNOTATE AIRCRAFT WRITE-UPS ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT FORMS (AFTO FORM 781A)	97
F146 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	96
F171 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	96
F136 MONITOR RADIO COMMUNICATION TRANSMISSIONS	95
H194 PERFORM PREFLIGHT WALKAROUND INSPECTIONS	95
F152 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	95
F168 STUDY TECHNICAL ORDERS FOR ABNORMAL AND EMERGENCY INFLIGHT PROCEDURES	92
G177 COORDINATE FCS ACTIVITIES WITH CREW	92
J285 PERFORM TERMINATE COUNTER MEASURES (TCM) PROCEDURES	92
F125 ADVISE MAINTENANCE PERSONNEL IN IDENTIFYING AIRCRAFT SYSTEMS MALFUNCTIONS	90
M379 PERFORM RADAR MONITORING OF AIR TRAFFIC IN CONGESTED AREAS	85
F143 OPERATE ULTRAHIGH FREQUENCY (UHF) RADIOS	81
J244 PERFORM DEFENSIVE COORDINATION EXERCISES ON B-52D or B-52G	80
K295 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 IMPROPER TURRET CONTROL IN TRACK MODES	79
K299 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 C SCOPE VIDEO LOSS	78
K327 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE CONTINUOUSLY SWEEPS PAST THE TARGET (NO LOCK ON)	77
K312 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 B SCOPE HAS TOO MUCH NOISE	76
O414 PARTICIPATE IN MONTHLY INSTRUCTOR SEMINARS	75
K304 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 SENSITIVITY TIME CONTROL (STC)	73
I209 PERFORM BEFORE TAKEOFF PROCEDURES ON THE 1BX AFSATCOM SYSTEM ON B-52G OR B-52H	72
G176 COORDINATE AIR FORCE SATELLITE COMMUNICATION (AFSATCOM) ACTIVITIES WITH CREW ON B-52G OR B-52H	70
J290 PERFORM 1BX AFSATCOM SYSTEM TERMINAL CHECKOUT PROCEDURES ON B-52G OR B-52H	70
I224 TRANSMIT AFSATCOM LAUNCH MESSAGE FOR B-52G OR B-52H	69

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 11190 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	PERCENT MEMBERS PERFORMING
A17 PREPARE BRIEFINGS	85
B25 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	85
F148 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	85
F165 REVIEW AFTO FORM 781 SERIES FOR AIRCRAFT DISCREPANCIES	85
F146 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	85
H194 PERFORM PREFLIGHT WALKAROUND INSPECTIONS	85
F171 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	85
F136 MONITOR RADIO COMMUNICATION TRANSMISSIONS	82
G178 PARTICIPATE IN CERTIFICATION OR PREPARTION FOR HIGHER HEADQUARTERS DIRECTED (HHD) MISSIONS	80
F152 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	80
O414 PARTICIPATE IN MONTHLY INSTRUCTOR SEMINARS	77
F168 STUDY TECHNICAL ORDERS FOR ABNORMAL AND EMERGENCY INFLIGHT PROCEDURES	77
A11 PARTICIPATE IN PLANNING OF HIGHER HEADQUARTERS DIRECTED (HHD) MISSIONS	75
A22 SCHEDULE FLIGHT TRAINING	75
D74 ADVISE UNIT GUNNERS OF LATEST EQUIPMENT MODIFICATIONS OR PROCEDURES	75
F143 OPERATE ULTRAHIGH FREQUENCY (UHF) RADIOS	75
I209 PERFORM BEFORE TAKEOFF PROCEDURES ON THE 1BX AFSATCOM SYSTEM ON B-52G OR B-52H	70
I213 PERFORM CLIMB PROCEDURES ON B-52G OR B-52H	70
J290 PERFORM 1BX AFSATCOM SYSTEM TERMINAL CHECKOUT PROCEDURES ON B-52G OR B-52H	67
G176 COORDINATE AIR FORCE SATELLITE COMMUNICATION (AFSATCOM) ACTIVITIES WITH CREW ON B-52G OR B-52H	67
A8 ESTABLISH ORGANIZATIONAL POLICIES, OPERATING INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	65
I224 TRANSMIT AFSATCOM LAUNCH MESSAGE FOR B-52G OR B-52H	65
M379 PERFORM RADAR MONITORING OF AIR TRAFFIC IN CONGESTED AREAS	65
K295 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 IMPROPER TURRET CONTROL IN TRACK MODES	65
K299 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 C SCOPE VIDEO LOSS	65
K327 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE CONTINUOUSLY SWEEPS PAST THE TARGET (NO LOCK ON)	63

TABLE 9

**REPRESENTATIVE TASKS PERFORMED BY DAFSC 11100 PERSONNEL  
(PERCENT MEMBERS PERFORMING)**

<b>TASKS</b>	<b>PERCENT MEMBERS PERFORMING</b>
B25 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	92
F126 ANNOTATE AIRCRAFT WRITE-UPS ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT FORMS (AFTO FORM 781A)	92
F152 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	92
F165 REVIEW AFTO FORM 781 SERIES FOR AIRCRAFT DISCREPANCIES	92
A11 PARTICIPATE IN PLANNING OF HIGHER HEADQUARTERS DIRECTED (HHD) MISSIONS	83
C72 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	83
B37 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	83
F125 ADVISE MAINTENANCE PERSONNEL IN IDENTIFYING AIRCRAFT SYSTEMS MALFUNCTIONS	83
K331 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE LOCKS ON BASE OF SCOPE	83
F171 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	83
F168 STUDY TECHNICAL ORDERS FOR ABNORMAL AND EMERGENCY INFLIGHT PROCEDURES	83
J332 PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE LOCKS ON BUT SYSTEM FAILS TO TRACK IN RADAR	83
F146 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	83
H194 PERFORM PREFLIGHT WALKAROUND INSPECTIONS	83
A17 PREPARE BRIEFINGS	75
F136 MONITOR RADIO COMMUNICATION TRANSMISSIONS	75
F148 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	75
A12 PLAN EMERGENCY WAR ORDER (EWO) EMPLOYMENT OF FIRE CONTROL SYSTEMS (FCS)	67
A3 DETERMINE MISSION PRIORITIES	67
C53 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	67
O414 PARTICIPATE IN MONTHLY INSTRUCTOR SEMINARS	67
K304 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 SENSITIVITY TIME CONTROL (STC)	67
I213 PERFORM CLIMB PROCEDURES ON B-52G OR B-52H	67
K296 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 LINE-OF- SIGHT FAILURE	67
K299 PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 C SCOPE VIDEO LOSS	67

TABLE 10  
RELATIVE PERCENT TIME SPENT ON DUTIES BY 111X0 DAFSC GROUPS

DUTY	DAFSC 11130/ 11150	DAFSC 11170	DAFSC 11190	DAFSC 11100
A ORGANIZING AND PLANNING	2.38	3.27	16.34	10.72
B DIRECTING AND IMPLEMENTING	0.75	2.90	4.77	10.04
C INSPECTING AND EVALUATING	1.16	3.07	5.01	10.13
D TRAINING	1.50	6.71	8.84	9.42
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	1.65	2.49	3.12	3.92
F PERFORMING COMMON AIRCREW TASKS	24.64	19.30	14.5	11.77
G MISSION PLANNING	5.43	4.33	3.71	2.76
H PERFORMING PREFLIGHT PROCEDURES	4.53	4.02	3.09	2.52
I PERFORMING PRETAKEOFF, TAKEOFF, AND CLIMB PROCEDURES	7.77	6.57	4.94	4.35
J PERFORMING CRUISE OR LOW LEVEL PROCEDURES	15.79	15.06	11.22	9.88
K PERFORMING MD-9 OR ASG-15 FIRE CONTROL SYSTEM (FCS) MALFUNCTIONS ANALYSIS	11.22	11.93	8.62	9.74
L PERFORMING ASG-21 FIRE CONTROL SYSTEM MALFUNCTIONS ANALYSIS	3.93	4.70	3.67	5.74
M PERFORMING DESCENT, LANDING, AND POST-FLIGHT PROCEDURES	4.79	4.40	3.61	3.54
N PERFORMING ALERT PROCEDURES	7.93	4.64	2.68	0.75
O PERFORMING RECURRING GROUND TRAINING PROCEDURES	3.38	3.74	3.83	2.85
P PERFORMING OR PRACTICING ABNORMAL AND EMERGENCY PROCEDURES	3.07	2.76	1.97	1.73



TABLE 11

## DISTRIBUTION ACROSS 111X0 FUNCTIONAL GROUPS BY DAFSC

<u>FUNCTIONAL GROUPS</u>	<u>DAFSC 11130 &amp; 11150</u>	<u>DAFSC 11170</u>	<u>DAFSC 11190</u>	<u>DAFSC 11100</u>
B-52D GUNNERS	36	37	4	0
B-52D CCTS GUNNER INSTRUCTORS	1	1	1	2
B-52G GUNNERS	100	54	13	1
B-52G/H CCTS GUNNER INSTRUCTORS	5	47	4	4
B-52H GUNNERS	48	26	7	1
STAFF MANAGERS	1	3	2	3

## ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

One important part of Occupational Survey Reports is the analysis of tasks performed by, and background characteristics of, respondents on the basis of months of Total Active Federal Military Service (TAFMS). This analysis aids in determining how jobs and job perceptions change over time, and can help describe the nature of jobs that personnel can expect to perform as their career progresses.

A common pattern found in most Air Force specialties is that junior personnel initially perform limited technical jobs, and with increasing experience assume broader technical responsibilities plus supervisory and administrative duties. The pattern found among experience groups of the Defensive Aerial Gunner specialty is substantially different from the common pattern. Members of this specialty do not have the luxury of having a long period of time working below a certain standard of proficiency, since the proficiency level of these members has a critical impact upon the success of flying missions. As a result, the initial training of AFS 111XO personnel is quite intense, raising the 3-skill level member to the proficiency level of 5- and 7-skill level personnel.

To aid in illustrating this point, the duties have been grouped under three headings as seen in Table 12. The first four enlistment groups (less than 193 months TAFMS) spent very similar amounts of relative time on each duty. The last two enlistment groups showed an increase in the relative proportion of time spent in supervisory and management activities. This presents a picture of a career ladder in which entry level personnel receive extensive initial training to perform technical activities and must maintain a high proficiency throughout the majority of their careers.

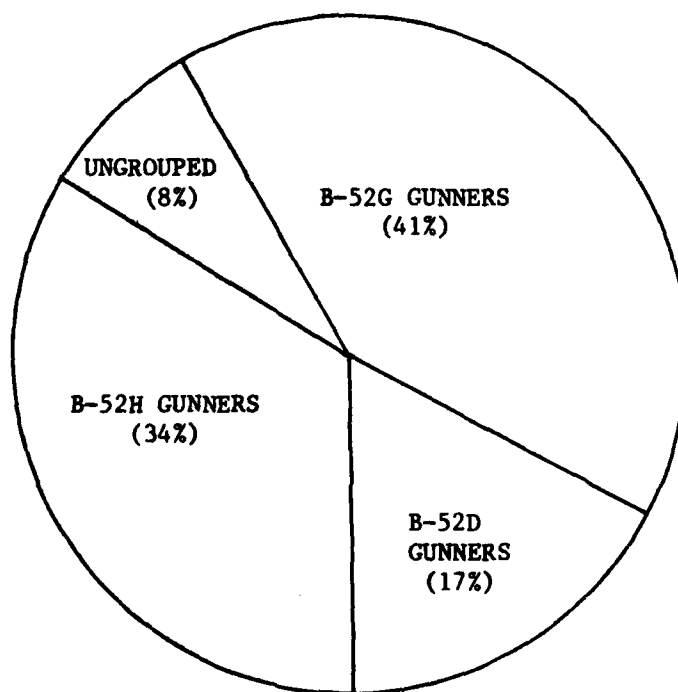
This pattern is apparent in the distribution of enlistment group members in the job groups identified by the job analysis process (Table 13). The three job groups representing line gunners--B-52D, B-52G, and B-52H gunners--contain nearly all of the first and second enlistment personnel and most of the career personnel. By contrast, jobs that are not primarily line gunnery in nature (i.e. Staff Managers, B-52D CCTS Gunner/Instructors, and B-52G/H CCTS Gunner/Instructors) are almost exclusively manned by career personnel.

### First Enlistment Personnel

Figure 2 displays the proportionate distribution of first enlistment personnel across job groups. First enlistment personnel are concentrated in the B-52G Gunner and B-52H gunner job groups (41 percent and 34 percent, respectively).

First enlistment personnel were also examined on the basis of both common tasks performed and various background information. Table 14 shows 32 tasks which are performed by the greatest percentages of first enlistment respondents. This listing of tasks indicates that the areas with greatest commonality for first enlistment personnel involves the performance of mission support activities such as participating in briefings and debriefings, inspecting aircraft gunnery areas, and performing details in support of flying missions.

FIGURE 2  
JOB GROUP DISTRIBUTION FOR FIRST ENLISTMENT 111X0 AIRMEN  
(N=90)



The background information presented in Table 15 demonstrates some similarities and differences between the first enlistment personnel and other groups. Most first enlistment personnel are designated Aircrew Members, but few hold any other prefix. In contrast, there are substantial numbers of second enlistment and career personnel holding M prefixes, indicating members certified to perform Standardization/Evaluation activities. Most respondents indicated that their flight status is Squadron Numbered Crew Gunner, although more than 20 percent of each group indicated their flight status as Mission Capable Gunner. Over half of the first enlistees (54 percent) indicated flying five or six missions per month, with another 29 percent flying three or four flights per month. Over half (51 percent) also indicated performing alert 11 to 15 times each month, with another 43 percent on alert six to ten times each month.

TABLE 12

PERCENT TIME SPENT ON DUTIES BY 111XO EXPERIENCE GROUPS  
(RELATIVE PERCENT TIME)

	FIRST AND SECOND JOBS (MONTHS TAFMS)		ENLISTMENT GROUPS (MONTHS TAFMS)					
	1-24 (N=34)	25-48 (N=56)	1-48 (N=90)	49-96 (N=120)	97-144 (N=88)	145-192 (N=48)	193-240 (N=55)	241+ (N=43)
<u>MANAGEMENT, SUPERVISION, AND TRAINING:</u>								
A ORGANIZING AND PLANNING	1	4	3	3	3	4	7	12
B DIRECTING AND IMPLEMENTING	0	0	0	1	1	4	5	6
C INSPECTING AND EVALUATING	0	1	0	1	2	3	6	6
D TRAINING	1	1	1	3	5	7	8	9
<u>ADMINISTRATIVE:</u>								
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	3	1	2	2	2	3	3	3
<u>AIRCREW RESPONSIBILITIES:</u>								
F PERFORMING COMMON AIRCREW TASKS	27	26	26	23	21	21	17	13
G MISSION PLANNING	6	5	5	5	5	5	4	3
H PERFORMING PREFLIGHT PROCEDURES	5	4	5	5	4	4	4	3
I PERFORMING PRETAKEOFF, TAKEOFF, AND CLIMB PROCEDURES	8	8	8	7	7	6	6	5
J PERFORMING CRUISE OR LOW LEVEL PROCEDURES	17	15	16	15	16	14	13	12
K PERFORMING MD-9 OR ASG-15 FIRE CONTROL SYSTEM (FCS) MALFUNCTION ANALYSIS	9	4	9	13	11	12	11	10
L PERFORMING ASG-21 FIRE CONTROL SYSTEM MALFUNCTION ANALYSIS	5	5	5	4	6	2	4	5
M PERFORMING DESCENT, LANDING AND POSTFLIGHT PROCEDURES	5	5	5	5	4	4	4	4
N PERFORMING ALERT PROCEDURES	8	9	9	7	6	5	3	2
O PERFORMING RECURRING GROUND TRAINING PROCEDURES	3	3	3	3	4	4	3	4
P PERFORMING OR PRACTICING ABNORMAL AND EMERGENCY PROCEDURES	2	3	3	3	3	2	2	3

TABLE 13

DISTRIBUTION OF PERSONNEL IN EXPERIENCE GROUPS WITHIN JOB GROUPS  
(NUMBERS OF PERSONNEL RESPONDING)

	AFMS GROUPS		
	FIRST ENLISTMENT 1-48 MONTHS (N=90)	SECOND ENLISTMENT 49-96 MONTHS (N=120)	CAREER 97+ MONTHS (N=234)
I. B-52D GUNNERS (GRP052, N=77)	15	19	43
II. B-52D CCTS GUNNER/INSTRUCTORS (GRP057, N=5)	0	0	5
III. B-52G GUNNERS (GRP034, N=175)	37	65	66
IV. B-52G/H CCTS GUNNER/INSTRUCTORS (GRP031, N=60)	0	8	52
V. B-52H GUNNERS (GRP041, N=86)	31	20	35
VI. STAFF MANAGERS (GRP011, N=9)	0	0	9
NOT GROUPED	7	8	24

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY AFS 111X0 PERSONNEL IN  
THEIR FIRST ENLISTMENT (1-48 MONTHS AFMS)  
(N=90)

TASKS	PERCENT PERFORMING
F144 ORDER AIRCREW FLIGHT LUNCHES	94
F146 PARTICIPATE IN CREW MAINTENANCE DEBRIEFINGS	93
F163 PICK UP COFFEE JUGS, WATER JUGS, OR OVENS	93
F170 TURN IN COFFEE JUGS, WATER JUGS, OR OVENS	92
G182 PREPARE PILOT HIGH ALTITUDE ROUTE MAPS	92
F165 REVIEW AFTO FORM 781 SERIES FOR AIRCRAFT DISCREPANCIES	92
F148 PARTICIPATE IN GENERAL OR SPECIALIZED MISSION BRIEFINGS	91
I218 PERFORM OXYGEN SYSTEM CHECKS	91
F171 VISUALLY INSPECT PANELS, LOCKS, OR FASTENERS	91
F162 PICK UP AND INSPECT FLIGHT LUNCHES	90
F172 VISUALLY INSPECT SPARE LIFE SUPPORT EQUIPMENT	90
F159 PERFORM SMALL ARMS QUALIFICATION	90
G177 COORDINATE FCS ACTIVITIES WITH CREW	89
N403 PERFORM NO-LOAD-ZONE SECURITY PROCEDURES	89
N404 PERFORM OR PRACTICE GROUND CREW DUTIES	89
F136 MONITOR RADIO COMMUNICATIONS TRANSMISSIONS	88
F135 MAINTAIN CURRENT STATUS OF FLIGHT MANUALS, SAFETY AND OPERATIONAL SUPPLEMENTS, AND FLIGHT CREW CHECKLISTS	88
F134 LOAD CREW GEAR ON AIRCRAFT	88
F158 PERFORM PERSONAL EQUIPMENT INSPECTIONS	88
H194 PERFORM PREFLIGHT WALKAROUND INSPECTIONS	88
G181 PREPARE FCS PLANNING LOGS OR FORMS	88
F164 POST CHANGES TO PERSONAL AIRCREW PUBLICATIONS	88
N405 PERFORM PREPARATORY STUDY OR CERTIFICATION ON ASSIGNED EWO SORTIES OR CONTINGENCY SORTIES	88
N386 PARTICIPATE IN DAILY ALERT BRIEFINGS	87
N385 PARTICIPATE IN ASSUMPTION OF ALERT BRIEFINGS	87
H186 PARTICIPATE IN CELL FORMATION BRIEFINGS OR MISSION BRIEFING REVIEWS	87
F126 ANNOTATE AIRCRAFT WRITE-UPS ON MAINTENANCE DISCREPANCY AND WORK DOCUMENT FORMS (AFTO FORM 781A)	85
M384 PREPARE DOCUMENTATION OF FCS MALFUNCTIONS IN GUNNER'S LOG OR AFTO FORM 781	84
G178 PARTICIPATE IN CERTIFICATION OR PREPARATION FOR HIGHER HEADQUARTERS DIRECTED (HHD) MISSIONS	84
H197 REVIEW AFTO 781C FOR AMMO STATUS	83
F152 PARTICIPATE IN PREMISSION WEATHER BRIEFINGS	82
F147 PARTICIPATE IN CREW OPERATION DEBRIEFINGS	82

**TABLE 15**  
**BACKGROUND INFORMATION ON AFS 111X0 PERSONNEL BY AFMS GROUPS**

	AFMS			
	1-24 MONTHS (N=34)	1-48 MONTHS (N=90)	49-96 MONTHS (N=120)	97+ MONTHS (N=234)
AVERAGE NUMBER TASKS PERFORMED:	143	149	168	188
AVERAGE GRADE:	E-3	E-3/E-4	E-5	E-6
DAFSC PREFIX: (PERCENT RESPONDING)				
A	38	48	42	31
D	3	1	0	0
K	0	6	30	46
M	0	2	6	15
NO RESPONSE	59	43	22	8
DAFSC: (PERCENT RESPONDING)				
11130	32	19	4	0
11150	68	79	66	13
11170	0	1	28	65
11190	0	0	1	17
11100	0	0	0	5
NO RESPONSE	0	1	1	0
CURRENT FLIGHT STATUS: (PERCENT RESPONDING)				
NOT ON FLIGHT STATUS	0	3	5	3
MISSION READY SPARE GUNNER	6	3	3	4
NONMISSION READY GUNNER	6	2	1	0
SQUADRON NUMBERED CREW GUNNER	62	68	63	39
MISSION CAPABLE GUNNER	23	23	23	21
STAFF GUNNER	0	0	8	35
AVERAGE NUMBER MISSIONS FLOWN PER MONTH: (PERCENT RESPONDING)				
NONE	0	1	2	5
1-2	0	0	7	29
3-4	29	29	24	28
5-6	44	54	47	23
7-8	21	10	14	11
9-10	0	2	6	3
11 OR MORE	3	3	2	2
AVERAGE NUMBER DAYS ON ALERT PER MONTH: (PERCENT RESPONDING)				
NONE	6	3	14	50
1-5	3	2	8	17
6-10	59	43	46	21
11-15	35	51	32	15
16-20	0	1	2	0
21 OR MORE	0	0	0	0



## COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

The survey data collected in this study were compared to the current 31 October 1979 AFR 39-1 Specialty Descriptions for the Defensive Aerial Gunner career ladder. The AFR 39-1 descriptions are intended to give a broad overview of duties and tasks required of personnel assigned to Air Force specialties at various skill levels.

Generally, the data collected in this occupational survey are consistent with the current specialty descriptions. There is one area of responsibility, however, that is not mentioned in the specialty descriptions: performance of Air Force Satellite Communications (AFSATCOM) System tasks by AFS 111XO members of B-52G and B-52H crew members. Nine tasks associated with operation of the AFSATCOM system were performed by substantial numbers of AFS 111XO personnel (see Table 16). This responsibility is relatively new to the Defensive Aerial Gunner specialty and is recommended for consideration in the next scheduled review of the AFS 111XO in AFR 39-1.

TABLE 16

**AFSATCOM TASKS PERFORMED BY AFS 111X0 PERSONNEL  
(PERCENT MEMBERS PERFORMING)**

<b>TASKS</b>	<b>B-52D PERSONNEL (N=77)</b>	<b>B-52G PERSONNEL (N=168)</b>	<b>B-52H PERSONNEL (N=86)</b>
G176 COORDINATE AIR FORCE SATELLITE COMMUNICATIONS (AFSATCOM) ACTIVITIES WITH CREW OF B-52G OR B-52H	1	95	97
I208 PERFORM BEFORE TAKEOFF PROCEDURES ON THE 1B AFSATCOM SYSTEM ON B-52G OR B-52H	0	37	59
I209 PERFORM BEFORE TAKEOFF PROCEDURES ON THE 1BX AFSATCOM SYSTEM ON B-52G OR B-52H	0	94	95
I224 TRANSMIT AFSATCOM LAUNCH MESSAGE FOR B-52G OR B-52H	0	89	99
J225 MONITOR ALL INCOMING AFSATCOM MESSAGES ON THE B-52G OR B-52H	0	89	97
J289 PERFORM 1B AFSATCOM SYSTEM TERMINAL CHECKOUT PROCEDURES ON B-52G OR B-52H	0	38	62
J290 PERFORM 1BX AFSATCOM SYSTEM TERMINAL CHECKOUT PROCEDURES ON B-52G OR B-52H	0	93	97
J294 TRANSMIT INFLIGHT SPECIALIZED AFSATCOM MESSAGES ON B-52G OR B-52H	0	90	95
O411 PARTICIPATE IN AFSATCOM PROCEDURES SEMINARS	3	83	87

## TRAINING ANALYSIS

As discussed in SURVEY METHODOLOGY, task difficulty and training emphasis ratings were obtained from selected DAFSC 11170 personnel. Their responses can be used as an effective tool to aid in assessing training relevancy. This section gives an overview of the TD and TE data. The detail required for training decisions has been published in the 111X0 Training Extract published under separate cover.

The DAFSC 111X0 STS is currently under revision and no POI exists for this AFSC. Consequently, no analysis of these documents was performed at this time.

### Task Difficulty

The tasks rated most difficult by selected 7-skill level personnel are listed at Table 17. The most difficult tasks can be categorized as training, staff work, and operational tasks. Some examples of those rated most difficult are develop training materials, perform fighter intercept exercises, develop tests, perform standardization evaluations, write staff studies, surveys or special reports, and perform strange field disarming procedures on B-52G.

When the duties were examined for average task difficulty within the duty, they were found to be ordered as shown in Table 18. Analyzing average task difficulty within each duty determined that Inspecting and Evaluating, Training, and Organizing and Planning were considered to be the three most difficult duties. Performing Fire Control System Malfunctions Analysis (both MD-9 or ASG-15 and ASG-21) were found to be the most difficult of the operational duties.

### Training Emphasis

The tasks requiring the highest training emphasis, as reported by selected 7-skill level personnel, are listed at Table 19. All of these tasks involved performing malfunction analysis on the MD-9 or ASG-15 fire control systems. This duty also received the highest average training emphasis rating (Table 20).

It is noteworthy that "Performing Common Aircrew Tasks" was found to be the duty with the smallest average task difficulty rating but received the second highest training emphasis rating.

TABLE 17

## TASKS RATED MOST DIFFICULT BY 111X0 PERSONNEL

<u>TASKS</u>	<u>TASK DIFFICULTY</u>	<u>PERCENT FIRST ENLISTMENT PERFORMING</u>
DEVELOP RESIDENT COURSE, CURRICULUM MATERIALS, OR CONTINUATION TRAINING MATERIALS	7.55	1
PREPARE APR'S	7.34	1
CONDUCT INITIAL QUALIFICATION TRAINING	7.06	4
PERFORM FIGHTER INTERCEPT EXERCISES ON B-52H	7.05	34
DEVELOP TESTS FOR EVALUATING AIRCREW TRAINING PROGRESS	6.99	2
PERFORM FIGHTER INTERCEPT EXERCISES ON B-52G	6.93	41
PERFORM FIGHTER INTERCEPT EXERCISES ON B-52D	6.88	19
PERFORM STANDARDIZATION EVALUATIONS	6.86	4
DRAFT BUDGET OR FINANCIAL REQUIREMENTS	6.82	1
DEVELOP T-1 PROFILE MISSIONS FOR MD-9 OR ASG-15 FCS	6.79	0
CONDUCT INSTRUCTOR UPGRADE TRAINING	6.75	2
DEVELOP STANDARDIZATION, EVALUATION, OR INSPECTIONS PROCEDURES	6.74	1
WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	6.72	1
PERFORM STRANGE FIELD DISARMING PROCEDURES ON B-52G	6.72	24
DEVELOP AND TEST PROGRAMS FOR WEAPONS SYSTEM TRAINERS (WST)	6.71	0
SELECT OPTIMUM MODE FOR B-52G FCS OPERATION	6.64	40
PERFORM PREPARATORY STUDY OR CERTIFICATION ON ASSIGNED EWO SORTIES OR CONTINGENCY SORTIES	6.62	88
ESTABLISH ORGANIZATIONAL POLICIES, OPERATING INSTRUCTIONS (OI), OR OR STANDARD OPERATING PROCEDURES (SOP)	6.59	2
EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	6.57	0
PERFORM FLIGHT TEST FOR NEW FLIGHT PROCEDURES	6.55	20
DIRECT OR IMPLEMENT FLIGHT TRAINING PROGRAMS	6.54	20
OPERATE B-52G FCS IN ALTERNATE MODES	6.52	41
SELECT OPTIMUM MODE FOR B-52D FCS OPERATION	6.52	17
OPERATE B-52D FCS IN ALTERNATE MODES	6.51	17
PLAN EMERGENCY WAR ORDER (EWO) EMPLOYMENT OF FIRE CONTROL SYSTEMS (FCS)	6.50	6
PERFORM FIRE CONTROL CHECKOUT PROCEDURES ON B-52G	6.47	40
EVALUATE TRAINING METHODS OR TECHNIQUES	6.47	1

TABLE 18

## DUTIES LISTED IN DESCENDING ORDER OF AVERAGE TASK DIFFICULTY

<u>DUTY</u>	<u>TD RANK</u>	<u>TD MEAN</u>	<u>TE RANK</u>	<u>TE MEAN</u>
C INSPECTING AND EVALUATING	1	5.9	15	0.7
D TRAINING	1	5.9	13	1.3
A ORGANIZING AND PLANNING	3	5.6	14	1
K PERFORMING MD-9 OR ASG-15 FIRE CONTROL SYSTEM (FCS) MALFUNCTIONS ANALYSIS	3	5.6	1	7.2
L PERFORMING ASG-21 FIRE CONTROL SYSTEM MALFUNCTIONS ANALYSIS	5	5.5	11	3.4
B DIRECTING AND IMPLEMENTING	6	5.4	15	0.7
O PERFORMING RECURRING GROUND TRAINING PROCEDURES	7	5.2	8	3.8
J PERFORMING CRUISE OR LOW LEVEL PROCEDURES	8	5.1	6	3.9
P PERFORMING OR PRACTICING ABNORMAL AND EMERGENCY PROCEDURES	9	4.9	9	3.7
M PERFORMING DESCENT, LANDING, AND POSTFLIGHT PROCEDURES	10	4.8	5	4.0
N PERFORMING ALERT PROCEDURES	10	4.8	6	3.9
I PERFORMING PRETAKEOFF, TAKEOFF, AND CLIMB PROCEDURES	12	4.6	4	4.1
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	13	4.5	12	1.5
G MISSION PLANNING	14	4.4	3	4.2
H PERFORMING PREFLIGHT PROCEDURES	15	4.1	9	3.7
F PERFORMING COMMON AIRCREW TASKS	16	3.6	2	4.3

TABLE 19

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR 111X0 PERSONNEL

TASKS	TRAINING EMPHASIS	PERCENT FIRST ENLISTMENT PERFORMING	TASK DIFFICULTY
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE LOCKS ON BUT SYSTEM FAILS TO TRACK IN RADAR	7.45	50.0	5.90
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 IMPROPER TURRET CONTROL IN TRACK MODES	7.42	56.7	6.35
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE CONTINUOUSLY SWEEPS PAST THE TARGET (NO LOCK ON)	7.38	53.3	5.58
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 LINE-OF-SIGHT FAILURE	7.33	55.6	6.14
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 C SCOPE VIDEO LOSS	7.33	51.1	5.60
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 TURRET FAILURE IN ACQUISITION MODE	7.33	50.0	5.76
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 SEARCH PRESENTATION DISAPPEARS ON B AND C SCOPES	7.33	53.3	5.54
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 B SCOPE COLLAPSES	7.29	46.7	5.57
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 B SCOPE VIDEO LOSS	7.25	52.2	5.66
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 SEARCH ANTENNA FAILURE TO NOD	7.24	45.6	5.91
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 SEARCH MODULATOR KICKOUT	7.24	52.2	5.49
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 B SCOPE HAS TOO MUCH NOISE	7.24	55.6	5.29
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 LOSES NOMINAL PREDICTION ANGLE IN ACQUISITION MODE	7.24	46.7	5.84
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 RANGE GATE LOCKS ON BASE OF SCOPE	7.22	55.6	5.61
PERFORM MALFUNCTION ANALYSIS FOR MD-9 OR ASG-15 TRACK MODULATOR KICKOUT	7.20	44.4	5.45
PERFORM MALFUNCTION ANALYSIS WHEN MD-9 OR ASG-15 MANUAL RANGING IS NOT POSSIBLE OR IS ERRATIC	7.20	48.9	5.83

TABLE 20

## DUTIES LISTED IN DESCENDING ORDER OF AVERAGE TRAINING EMPHASIS

<u>DUTY</u>	<u>TE</u> <u>RANK</u>	<u>TE</u> <u>MEAN</u>	<u>TD</u> <u>RANK</u>	<u>TD</u> <u>MEAN</u>
K PERFORMING MD-9 OR ASG-15 FIRE CONTROL SYSTEM (FCS) MALFUNCTIONS ANALYSIS	1	7.2	3	5.6
F PERFORMING COMMON AIRCREW TASKS	2	4.3	16	3.6
G MISSION PLANNING	3	4.2	14	4.4
I PERFORMING PRETAKEOFF, TAKEOFF, AND CLIMB PROCEDURES	4	4.1	12	4.6
M PERFORMING DESCENT, LANDING, AND POSTFLIGHT PROCEDURES	5	4.0	10	4.8
J PERFORMING CRUISE OR LOW LEVEL PROCEDURES	6	3.9	8	5.1
N PERFORMING ALERT PROCEDURES	6	3.9	10	4.8
O PERFORMING RECURRING GROUND TRAINING PROCEDURES	8	3.8	7	5.2
H PERFORMING PREFLIGHT PROCEDURES	9	3.7	15	4.1
P PERFORMING OR PRACTICING ABNORMAL AND EMERGENCY PROCEDURES	9	3.7	9	4.9
L PERFORMING ASG-21 FIRE CONTROL SYSTEM MALFUNCTIONS ANALYSIS	11	3.4	5	5.5
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	12	1.5	13	4.5
D TRAINING	13	1.3	1	5.9
A ORGANIZING AND PLANNING	14	1.0	3	5.6
B DIRECTING AND IMPLEMENTING	15	0.7	6	5.4
C INSPECTING AND EVALUATING	15	0.7	1	5.9

## COMPARISON TO PREVIOUS SURVEY

A comparison of this 111XO career field analysis to the previous report (dated 1978) indicates that this is a stable career field. The career ladder structure is essentially the same in nature and specifics performed by each of the groups identified. Both analyses indicated that all skill level personnel remained involved in the operational tasks. In addition, involvement in supervisory, training and management tasks increased in both analyses as the gunners progressed through the skill levels.

In the course of most occupational surveys, responses to job satisfaction questions are usually compared to the responses of recently surveyed members of related career ladders. This comparison is not possible for Defensive Aerial Gunners, since none of the Aircrew specialties have been studied in the last year. In lieu of comparative data on related specialties, the responses of members in this study have been compared to the job satisfaction responses to the AFS 111XO survey performed in 1978 (see Table A3). This comparison shows some substantial differences in responses between the two studies, particularly in members' intentions to reenlist. There has been a dramatic increase among first job and first enlistment personnel in the proportion planning to reenlist. Conversations with personnel at AFMPC indicate that there has been a concurrent increase in actual reenlistment rates for first enlistees during the 1978-to-1981 period.

A modification of the reenlistment question was made in the current study to separate out individuals who intend to retire with 20 years active military service from those who intend to exit the service without completing a 20-year career. This modification shows more meaningfully the reenlistment intentions of career personnel.

Except for reenlistment intentions, the only other job satisfaction comparison which shows substantial differences between the 1978 respondents and 1981 respondents is the first job (one to 24 months) group's feelings about how well their jobs utilize their talents. Eighty-two percent of current first job personnel feel their talents are well utilized, while only 56 percent of the 1978 first job personnel felt that way.



TABLE 21

COMPARISON OF JOB SATISFACTION INFORMATION FROM AFS 111XO PERSONNEL  
1978 STUDY AND PRESENT STUDY BY AFMS GROUPS  
(PERCENT RESPONDING)

	1-24 MONTHS		1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	1978	1981	1978	1981	1978	1981	1978	1981
<u>HOW DO YOU FIND YOUR JOB:</u>								
DULL	8	6	12	11	18	8	8	8
SO-SO	13	9	13	16	8	6	9	6
INTERESTING	76	85	74	73	73	85	82	85
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>								
VERY LITTLE OR NOT AT ALL	44	18	50	40	36	29	17	18
FAIRLY WELL OR BETTER	56	82	50	60	63	71	83	81
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>								
VERY LITTLE OR NOT AT ALL	3	3	8	13	10	7	6	9
FAIRLY WELL TO PERFECTLY	97	97	92	87	88	92	93	90
<u>DO YOU PLAN TO REENLIST:</u>								
NO, I WILL RETIRE WITH 20 YEARS MILITARY SERVICE	*	0	*	0	*	1	*	20
NO OR PROBABLY NO	56	35	60	39	32	27	29	9
YES OR PROBABLY YES	39	65	37	61	66	71	71	71

\*THIS OPTION WAS NOT AVAILABLE TO RESPONDENTS DURING THE 1978 STUDY

## IMPLICATIONS

The results of this survey are very similar to those of the last analysis published in 1978. This indicates a stable career ladder. All skill level personnel continue to perform the spectrum of operational tasks, taking on more training, supervisory, and managerial responsibilities as they progress through the skill levels.

AFSATCOM responsibilities have been added to the jobs of the B-52G and B-52H defensive aerial gunners and should be considered for inclusion in the 111X0 AFR 39-1 Specialty Description.

Of the forty-eight tasks included in the common aircrew duty, more than 30 percent of the defensive aerial gunners performed all but four. A complete analysis of this duty will be performed in a future report that will address the common aircrew duty as it is performed by all enlisted aircrew specialties.

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